





# Ajax Energy Corporation

Ajax, Ontario

*"This was a great project. It helped us to reduce our fossil fuel costs and increase our combustion of wood for the district heating system."*

Joseph Saab, P.Eng  
Vice-President, Technical Services  
Ajax Energy Corporation

## THE COMPANY

Ajax Energy Corporation is a district heating system which provides steam through underground pipes to more than 20 industrial and institutional sites in the Town of Ajax, Ontario.

The heating system has steadily expanded since its inception in 1941. The centrally-located boiler plant can continuously supply steam at a pressure of 150 psig (1034 kPag). The plant's multiple boiler back-up system, diversified fuel sources (natural gas, fuel oil and wood waste) and steam turbine cogeneration of electricity combine to assure reliability.

This secure source of low-price steam means that customers such as Ajax Community Centre, Du Pont Canada Inc. and Dominion Colour Corporation do not need to maintain their own boiler plants.

## THE CHALLENGE

To maintain an economical supply of steam for its customers, Ajax Energy Corporation must burn the lowest cost fuel which is environmentally-acceptable. The company is also interested in reducing the amount of wood waste generated in the region from construction sites and industrial packaging. This wood cannot be recycled in particle board mills because it contains nails and other metal objects.

## OPPORTUNITIES

Since 1984, Ajax Energy has produced increased amounts of steam by burning wood waste in modern boilers in an environmentally acceptable manner. This method reduces the use of non-renewable fossil fuels and helps



*Ajax Energy Corporation plant, Town of Ajax, Ontario.*

to solve the problem of the disposal of wood waste. The competitive cost of steam to customers is also maintained by a "tipping fee" which is charged by Ajax Energy to the producer of the wood waste.

## ACTION TAKEN

In 1994, Ajax Energy Corporation decided to expand its ability to produce steam from wood burning from 80 per cent to 100 per cent of plant capacity. Two new wood combustors were connected to two waste heat boilers to replace two natural gas-fired boilers.

## RESULTS

The two new Consumat combustors annually burn over 13,000 tonnes of clean, dry, non-recyclable wood waste to produce 120 million pounds (55 million kg) of steam. This saves 118 million cubic meters of natural gas and 1.1 million litres of #6 fuel oil each year. The scrap metal from the wood is separated from the ashes and sold to dealers.

The total cost of the new wood waste project will be recovered in operating savings within several years. The operation of the plant and its dis-

charges to the atmosphere fully comply with Ministry of Environment and Energy regulations.

## REPLICATION OPPORTUNITIES

Similar plants can be built in Ontario and elsewhere to produce steam for district heating and electric power generation, while eliminating large quantities of non-recyclable wood waste.

## PARTNERSHIP IN POLLUTION PREVENTION AND RESOURCE CONSERVATION

Industrial companies doing business in Ontario may seek ministry/industrial services that will help them to:

- \* use energy and water more efficiently;
- \* reduce, reuse and recycle solid waste; and
- \* reduce or eliminate liquid effluents and gaseous emissions.

Equipment and services supply companies can benefit from the information provided on technologies identified for business development.





*Two large grapples load wood waste into the combustors. In the background, a truck discharges more wood waste which will be moved under the grapples by bulldozer.*

## FOR MORE INFORMATION, PLEASE CONTACT:

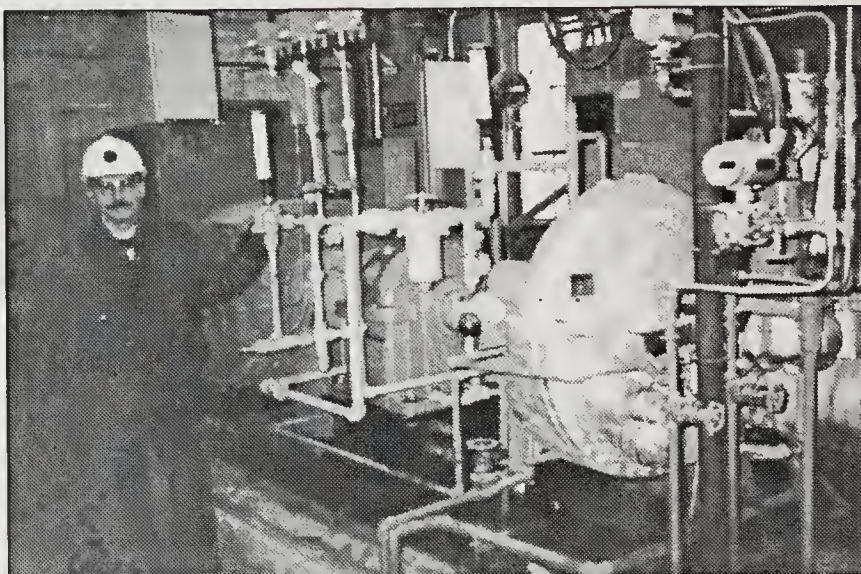
Joseph Saab, P.Eng.  
Ajax Energy Corporation  
170 Mills Rd.  
Ajax, Ontario  
L1S 2H1  
Tel: (905) 457-5044  
Fax: (905) 457-3780

Tom Markowitz, P.Eng.  
Industry Conservation Branch  
Ministry of Environment and Energy  
2 St. Clair Ave. W., 14th Floor  
Toronto, Ontario  
M4V 1L5  
Tel: (416) 327-1443  
Fax: (416) 327-1261  
E-mail: markowit@ene.gov.on.ca

## MINISTRY OF ENVIRONMENT AND ENERGY SERVICES

For information on Ministry of Environment and Energy assistance to industry, please contact the Industry Conservation Branch at (416) 327-1492, Fax (416) 327-1261.

For more project profiles and other publications, visit the ministry's website at <http://www.ene.gov.on.ca>



*590 kw steam turbo-generator.*

*This project profile was prepared and published as a public service by the Ontario Ministry of Environment and Energy. Its purpose is to transfer information to Ontario companies about industrial companies that have undertaken retrofits that improve the environment and their bottom line.*

*Publication of this project profile does not imply product endorsement. The ministry does not warrant the accuracy of the contents and cannot guarantee or assume any liability for the effectiveness or economic benefits of the recommendations or the technologies described herein or that their use does not infringe privately owned rights.*

*In addition, the ministry cannot be held liable for any injury or damage to any person or property as a result of the implementation of any part of this profile.*

*Pour tout renseignement en français au sujet du programme d'écologisation industrielle du Ministère de l'Environnement et de l'Énergie, veuillez composer le 416-327-1443, télécopieur 416-327-1261, courrier électronique : markowit@ene.gov.on.ca*



